

L Number	Hits	Search Text	DB	Time stamp
1	7	(("6482584") or ("D461248") or ("5899939") or ("6123731")).PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/30 07:49
2	8	(("6482584") or ("D461248") or ("5899939") or ("6123731") or ("6613278")).PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/30 09:02
4	4	wo-0040177\$.did. or wo-0029037\$.did. or wo-9938543\$.did. or wo-0054821\$.did. or wo-9909914\$.did.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/30 09:05
5	4	wo-00/40177\$.did. or wo-00/29037\$.did. or wo-9938543\$.did. or wo-00/54821\$.did. or wo-9909914\$.did.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/30 09:08
6	7	wo-200040177\$.did. or wo-200029037\$.did. or wo-9938543\$.did. or wo-200054821\$.did. or wo-9909914\$.did.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/30 09:09
7	16	((("6025538") or ("5814084") or ("6090998") or ("5676700") or ("6200347")) .PN.) or (wo-200040177\$.did. or wo-200029037\$.did. or wo-9938543\$.did. or wo-200054821\$.did. or wo-9909914\$.did.)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/30 11:41
8	109	(maglione.xp. or mcdermott.xp.) and heparin	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/30 10:43
9	6	(maglione.xp. or mcdermott.xp.) and heparin and (smith-chalin\$.xa.)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/30 09:28
10	1371	maglione.xp. or mcdermott.xp.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/30 10:43
11	772	prebilic\$.xa, xp.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/30 11:08
12	780	preb\$.xa, xp.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/30 11:10
13	0	623/23.51,23.56,23.63	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/30 11:41
14	275	(623/23.51,23.56,23.63).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/30 13:31
15	756	(623/17.11,17.16).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/30 13:49
16	1012	((623/23.51,23.56,23.63).CCLS.) or ((623/17.11,17.16).CCLS.)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/30 13:53
17	7732	pin same bone	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/30 13:54

18	37	pin same bone and 623/\$.ccls. and preb\$.xp.	USPAT; US-PPGPUB; EPO; JPO; DERWENT USPAT; US-PPGPUB; EPO; JPO; DERWENT USPAT	2003/10/30 13:54
3	10	(("6025538") or ("5814084") or ("6090998") or ("5676700") or ("6200347")).PN.	USPAT;	2003/10/30 13:58
19	21	("2621134" "4135506" "4512038" "4553272" "4950296" "4964865" "5084051" "5152791" "5201771" "5314478" "5354300" "5397362" "5674286" "5728157" "5769897" "5820581" "5876453" "5899939" "5916585" "5989289" "6025538").PN.	USPAT	2003/10/30 13:58
20	8	6200347.URPN.	USPAT	2003/10/30 14:02

Document ID	KS	Issue Date	Page	Title
1 US 6638309 B2	U	20031028	17	Method of
2 US 6379385 B1	U	20020430	5	Implant of
3 US 20020035401	U	20020321	15	Osteoinductive
4 US 20020029084	U	20020307	42	Bone implant
5 US 6146420 A	U	20001114	12	Osteoinductive
6 US 5861041 A	U	19990119	11	Intervertebral
7 US 4950296 A	U	19900821	4	Bone graft

United States Patent [19]

McIntyre

[11] Patent Number: 4,950,296

[45] Date of Patent: Aug. 21, 1990

[34] BONE GRAFTING UNITS

[76] Inventor: Jonathan L. McIntyre, 2384 Grove
View Rd., San Diego, Calif. 92119

4,694,464 3/1987 Miniminder et al. 62/16

4,678,470 2/1987 Neafie et al. 62/16

4,763,256 3/1988 Brantigan 62/16 X

4,834,777 5/1989 Brantigan 62/16 X

3,805,947 6/1966 Fed. Rep. of Germany 62/16

130,971 5/1987 U.S.E.E. 62/16

[21] Appl. No.: 343,766

[22] Filed: Jan. 13, 1989

15 Claims, 1 Drawing Sheet

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 179,221, Apr. 7, 1986,
abandoned.

[31] Int. Cl. A61F 2/28

[52] U.S. Cl. 623/16, 606/78

[56] Field of Search 623/16, 66, 17,
128/92 R, 924 R, 924 G, 924 R, 606/69,
70, 76, 86

[56] References Cited

U.S. PATENT DOCUMENTS

1,844,420 11/1974 Ma et al. 62/17 X

FOREIGN PATENT DOCUMENTS

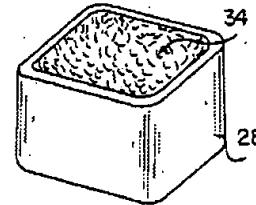
Primary Examiner—Alan Cannon

Attorney, Agent or Firm—Baker, Matham, Jester &

Meador

[37] ABSTRACT

A bone grafting unit comprises a cortical shell having a selected outer shape and size for transplanting and a cavity formed therein for receiving a cancellous plug, and a cancellous plug fixed into said cavity in a manner to expose at least two surfaces thereof to the exterior of said shell.



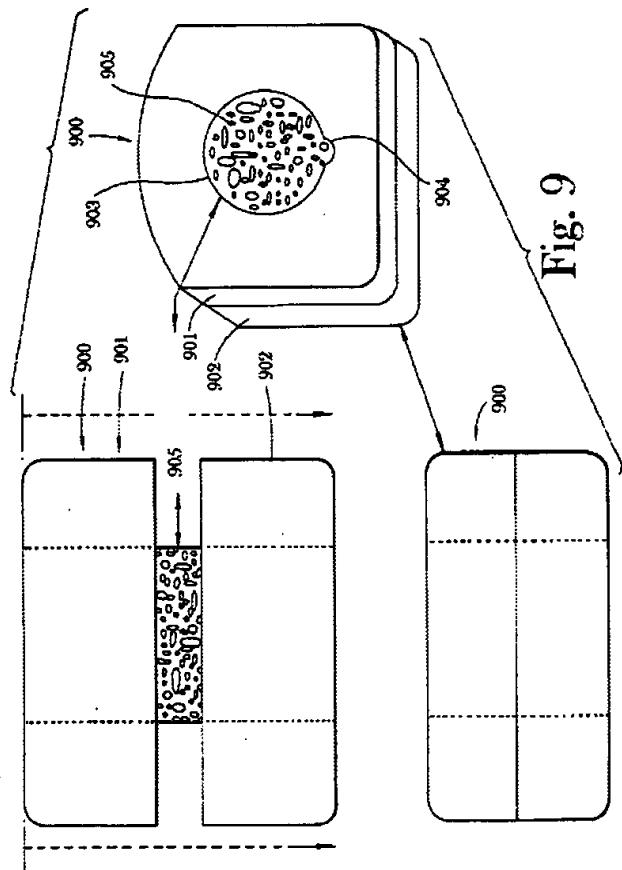
10/30/03 Best Art subclass search

Document ID	RS	Issue Date	Page	Title
1 WO 200029037 A	D	20030902	33	Apparatus
2 US 20020016592	D	20030724	51	Cortical t
3 EP 876129 B	D	20030516	11	Diaphysial
4 US 6090998 A	D	20021205	15	Implant fo
5 US 6200347 B1	U	20010313	48	Composite
6 WO 200054821 A	D	20000921	52	Molded im
7 US 6090998 A	U	20000718	15	Segmentall
8 US 6200347 B	D	20000713	48	Composite
9 US 6025538 A	U	20000215	16	Compound t
10 US 6025538 A	D	20000215	16	Compound t
11 WO 9938543 A2	AE	19990805	37	BONE PASTE
12 US 20020018796	D	19990805	13	Implantabl
13 WO 9909914 A1	E	19990304	60	CORTICAL
14 US 5814084 A	U	19980929	11	Diaphysial
15 US 5676700 A	U	19971014	8	Interlocki
16 EP 709070 A	D	19960501		Interlocki

WO 9909914

PCT/US98/17769

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Document ID	Issue Date	Page	Title
US 6638309 B2	U 20031028	17	Method of us.
US 20020120346	U 20020829	25	Demineralize
US 20020035401	U 20020321	15	Osteogenic i
US 20020029084	U 20020507	47	Bone Implant
US 20010041942	U 20011115	7	Novel compos
US 20010002446	U 20010531	11	Tissue graft
US 4950296 A	U 19900821	4	Bone graftin

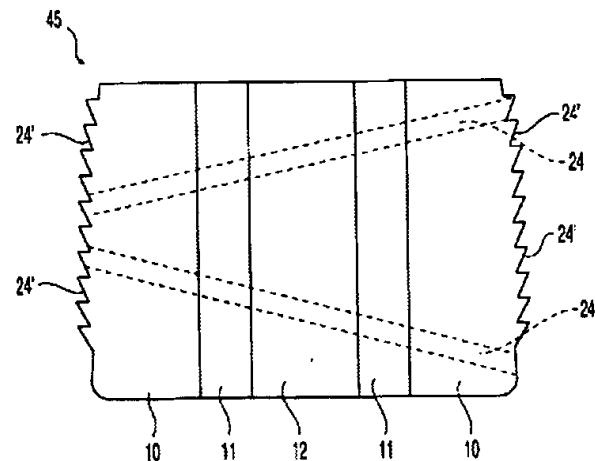


Fig. 2C

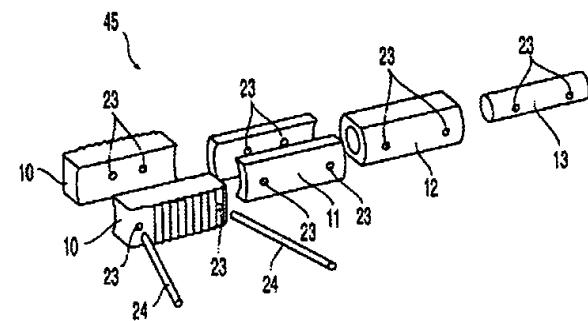


Fig. 2D

Document ID	Issue Date	Page	Title
WO 200029037 A	D 20030902	33	Apparatus fo
US 20020016592	D 20030724	51	Cortical bon
EP 876129 B	D 20030516	11	Diaphysial d
US 6090998 A	D 20021205	15	Implant for
US 6200347 B1	U 20010313	48	Composite bo
WO 200054821 A	D 20000921		Molded impla
US 6090998 A	U 20000718	15	Segmentally
US 6200347 B	D 20000713		Composite bo
US 6025538 A	U 20000215	16	Compound bon
US 6025538 A	D 20000215		Compound bon
WO 9938543 A2	AE 19990805	37	BONE PASTE S
US 20020018796	D 19990805		Implantable
WO 9909914 A1	E 19990304		CORTICAL BON
US 5814084 A	U 19980929	11	Diaphysial c
US 5676700 A	U 19971014	8	Interlocking
EP 709070 A	D 19960501		Interlocking

U.S. Patent

Jul. 18, 2000

Sheet 5 of 8

6,090,998

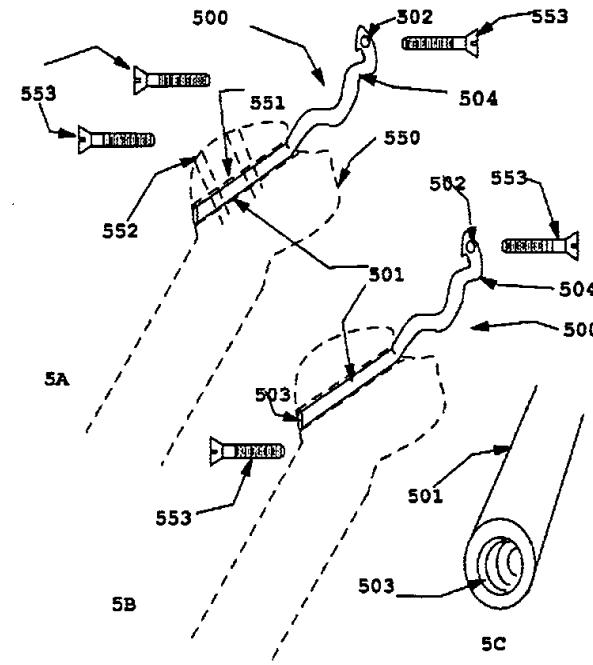


FIGURE 5

Document ID	Issue Date	Page	Title
1. US 6635087 B2	U 20031021 23		Laminoplasty
2. US 6632247 B2	U 20031014 31		Implants for
3. US 6595998 B2	U 20030722 38		Tissue distr
4. US 6554863 B2	U 20030429 14		Intervertebr
5. US 6494883 B1	U 20021217 10		Bone reinfor
6. US 6458144 B1	U 20021001 13		Methods for
7. US 6387130 B1	U 20020514 15		Segmented li
8. US 6379385 B1	U 20020430 5		Implant of b

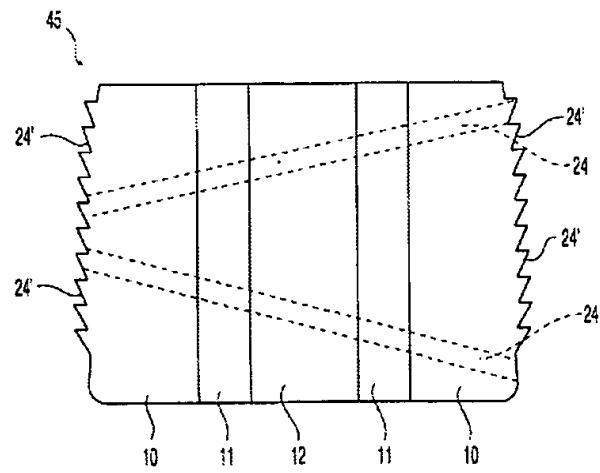


Fig. 2C

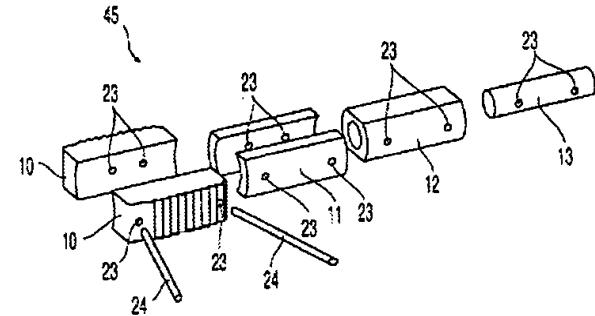


Fig. 2D

Document ID	NSC Issue Date	Page	Title
1 US 5329846 A	U 19940719	19	Tissue pre
2 US 5397365 A	U 19950314	12	Composite
3 US 5496372 A	U 19960305	54	Hard tissue
4 US 5522895 A	U 19960604	6	Biodegradab
5 US 5522894 A	U 19960604	14	Bone replac
6 US 5545222 A	U 19960813	19	Method usi
7 US 5591233 A	U 19971017	14	Metal/comp
8 US 5645592 A	U 19970708	13	Use of hyd
9 US 5662710 A	U 19970902	16	Tissue pre
10 US 5769897 A	U 19980623	10	Synthetic
11 US 5800544 A	U 19980901	35	Tendon and
12 US 5888219 A	U 19990330	16	Method of
13 US 5899939 A	U 19990504	8	Bone-deriv
14 US 6005162 A	U 19991221	7	Methods of
15 US 6017366 A	U 20000125	8	Resorbable
16 US 6027534 A	U 20000222	10	Modular e
17 US 6065476 A	U 20000523	11	Method of
18 US 6080192 A	U 20000627	34	Tendon and
19 US 6113640 A	U 20000905	12	Reconstructi
20 US 6123731 A	U 20000926	14	Osteoimpla
21 US 6132472 A	U 20001017	16	Tissue pre
22 US 6190414 B1	U 20010220	19	Apparatus
23 US 6217620 B1	U 20010417	11	Reinforcin
24 US 6290725 B1	U 20010918	16	Modular e
25 US 6294041 B1	U 20010925	13	Method for
26 US 6342051 B1	U 20020129	6	Treatment
27 US 6361565 B1	U 20020326	16	Expandable
28 US 6387131 B1	U 20020514	5	Knee prost
29 US 6436138 B1	U 20020820	12	Process fo
30 US 6458160 B2	U 20021001	7	Knee prost
31 US 6503277 B2	U 20030107	17	Method of
32 US 6517579 B1	U 20030211	10	Method and
33 US 6527803 B1	U 20030304	18	Intersomati
34 US 6585771 B1	U 20030701	7	Device for
35 US 6616698 B2	U 20030909	16	Bone graft
36 US 6630000 B1	U 20031007	19	Method of
37 US 6638309 B2	U 20031028	17	Method of

United States Patent [15]

(11) Patent Number: 5,800,544
(45) Date of Patent: Sep. 1, 1998

150 TENDON AND LIGAMENT REPAIR SYSTEM

FOREIGN PATENT DOCUMENTS

[45] Date of Patent: Sep. 1, 1998

[45] Date of Patent: Sep. 1, 1998

FOREIGN PATENT DOCUMENTS

9-520-17-01 12/1992 Enclosed Part 01

OTHER PUBLICATIONS

Boystros, M.D. and Fedale, P.D. The basic science of anterior cruciate ligament surgery. *Orthop. Rev.* 22:673-679

Hoffmann, M.W. et al. Repair and reconstruction of the anterior cruciate ligament by the "sandwich technique".

Arch. Orthop. Trauma Surg., 112:113-120 (1993).

Lazovic, D. and Meister, K.: Collagen repair rate improves by fibrin scheduling. *Acta Orthop. Scand.*, 64:583-586 (1993).
 Lyon, R.M., et al.: Ultrastructural differences between the cells of the medial collateral and the anterior cruciate ligaments. *Clin. Orthop.*, 279-286 (1991).

(List continued on next page.)

*Primary Examiner—Paul B. Preble
Attorney, Agent, or Firm—Christensen, O'Conor, Johnson
& Frazee, P.C.*

[57] ABSTRACT

The damaged portion of an injured tendon or ligament (C) is usually converted into a thin, hollow sleeve

("connective cord") is inserted into a thin, hollow sleeve (100, 110, 120, 130, 140, 160, 180, 200, 240, 245, 270, 300, 390, generically designated "S") and is connected to the

sleeve (S) such that the cord-sleeve combination can immediately withstand normal tensile forces. The interconnection can be mechanical, such as by pins (22, 22', 148, 156, 164, 188, 194, 206, 206', 218, 226, 230, 238, 239, 366, 368, 389) extending through the sleeve (S) and cord (C). The sleeve (S) can be bondable over a sufficiently long period of time that the cord (C) is healed by the time the sleeve (S) is absorbed.

179 Clauses 19 Reading Survey

